

## **AMENDMENTS TO THE CLAIMS**

The following listing of claims will replace all prior versions and listings of claims in the application.

### **LISTING OF CLAIMS**

1. (currently amended) A dynamoelectric machine comprising:  
a stator core having a longitudinal axis and a length along said axis;  
wire windings on said stator core;  
a rotor shaft;  
a rotor positioned within the stator core and mounted for rotation relative to the stator core about said axis to interact magnetically with the stator core and windings, the rotor having a length along said axis; ~~and~~  
at least one capacitor;  
at least a first bearing supporting the rotor shaft for rotation, said first bearing being positioned longitudinally within the stator core; and  
at least one endshield having a cavity for holding the capacitor;  
wherein said length of the rotor is less than said length of the stator.
2. (previously presented) A dynamoelectric machine as set forth in claim 1 wherein said length of the rotor is less than said length of the stator.
3. (previously presented) A dynamoelectric machine as set forth in claim 1 wherein the rotor is longitudinally centered in the stator core.

4. (previously presented) A dynamoelectric machine as set forth in claim 1 further comprising a second bearing supporting the rotor shaft for rotation.

5. (previously presented) A dynamoelectric machine as set forth in claim 1 wherein the rotor includes a recess for receiving said first bearing.

6. (original) A dynamoelectric machine as set forth in claim 1 further comprising two endshields defining opposite ends of the machine, at least one of the endshields having a portion which extends to a longitudinal position within the stator core.

7. (original) A dynamoelectric machine as set forth in claim 6 wherein at least one said endshield comprises a housing for mounting electronic components of the machine.

8. (canceled)

9. (original) A dynamoelectric machine as set forth in claim 1 further comprising a cooling jacket for removing heat from the machine, the cooling jacket being in heat transfer communication with the stator core along the entire said length of the stator core.

10. (original) A dynamoelectric machine as set forth in claim 1 wherein said machine is a switched reluctance type machine.

11. (currently amended) A dynamoelectric machine comprising:  
a stator core having a longitudinal axis and a length along said axis;  
wire windings on said stator core;  
a rotor mounted for rotation relative to the stator core about said axis to interact magnetically with the stator core and windings; ~~and~~  
at least one capacitor; and  
two endshields defining opposite ends of the machine, at least one of the endshields having a portion which extends to a longitudinal position within the stator core and at least one of the endshields having a cavity for holding the capacitor.

12. (previously presented) A dynamoelectric machine as set forth in claim 11 further comprising a rotor shaft and two bearings supporting the rotor shaft for rotation, and wherein the rotor and at least one of the bearings is positioned longitudinally within the stator core.

13. (original) A dynamoelectric machine as set forth in claim 12 wherein the rotor includes a recess for receiving said bearing.

14. (original) A dynamoelectric machine as set forth in claim 11 further comprising a cooling jacket for removing heat from the machine, the cooling jacket being in heat transfer communication with the stator core along the entire said length of the stator core.

15. (original) A dynamoelectric machine as set forth in claim 11 wherein said machine is a switched reluctance type machine.

16. (new) An integrated starter generator for an automotive vehicle comprising:  
a switched reluctance machine having a stator core and a rotor, the stator core having a longitudinal axis and a length along said axis, the rotor positioned within the stator core and having a length along said axis, a rotor shaft, at least a first bearing supporting the rotor shaft for rotation, and at least one endshield extending to a longitudinal position within the stator core, wherein said first bearing being positioned longitudinally within the stator core, wherein said length of the rotor is less than said length of the stator.

17. (new) The integrated starter generator of claim 16 further comprising a cooling jacket for removing heat from the generator, the cooling jacket being in heat transfer communication with the stator core along the entire said length of the stator core.